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# NORTHERN NOVELTIES FOR 1924

Some New Fruits, Shrubs, Trees, Alfalfas and a Table Cereal. Department of Horticulture, South Dakota State College of Agriculture and Mechanic Arts, Brookings. Printed December 27, 1923.

## Introduction by Dr. N. E. Hansen

This list offers what is ready from my twenty-ninth year of experiments in originating new fruits at this Station. Much more remains to be done. Many more varieties worthy of trial are coming on. To the many friends who have followed the progress of the experiments with such cordial interest and have helped by sending in orders, I extend my hearty thanks for aiding in this work which is of such great economic importance. The money received from the sale of plants makes possible the fruit-breeding work on a larger scale than would otherwise be possible.

Many of these new varieties are offered only once or twice as there is not enough land for nursery propagation. The available stock is so limited that only by early orders are you sure of getting what you want. So please order promptly.

## State Orchards

The Legislature last winter appropriated \$10,000 annually for two years beginning July 1, 1923. The work has been started at several places, especially Sioux Falls, Watertown, Aberdeen, Philip, Pierre and Eureka. The chief of the work is:

1. To test all the standard varieties.
2. To demonstrate the best systems of orchard management.
3. To test out many thousands of new seedlings which I am originating every year.
4. To establish stock orchards, especially for the Siberian wild blight-proof pears and wild apples, to grow hardy seedlings upon which to bud the new hybrids coming on.

There will be some income from the sale of the seedlings to nurserymen, also from the sale of fruit.

I trust that the next Legislature will give us an appropriation for a tree cellar and cold storage building with fruit-breeding greenhouse and fruit laboratory in connection.

## Anoka Apple

Introduced 1918 before fruiting as South Dakota No. 2. Now given the name Anoka, a Sioux Indian word meaning "on both sides." It is a seedling of Mercer (Fluke) wild crab top-grafted on Duchess. This tree has borne heavily in 1918 and 1919. The fruit is two and one-half inches in diameter, round, Duchess type of coloring. Flesh white, good subacid. Season September. I am pleased with the early and heavy bearing of this variety under propagation. I believe this apple is destined to wide popularity as it bears even on young nursery trees.

In the spring of 1920 four trees of Anoka apple, one year buds on seedlings of Red Siberian Crab, were sent to the Experiment Station at Fargo, North Dakota. Under date of December 2, 1922, Professor A. F. Yeager, Agricultural College, Fargo, North Dakota, reports on these trees as follows: "This spring two of the four trees blossomed, one produced 23 apples, the other 26. Practically all the fruit was set from lateral buds. Upon examination this fall it seems that all four of the Anoka apple trees have a lot of lateral fruit buds showing. The trees are not yet as high as one's head and were scarcely four feet high last spring. They began ripening about the 15th of August. The apples are medium to above medium in size, but somewhat larger than Duchess. They are oblong in character. Our specimens showed very little color. The flavor seemed to be very similar to Duchess. If the variety continues to flourish as it has so far it should be a big addition to our fruit list."

Price of trees, one year buds on Olga crab seedlings, each \$1.00.

## Into Crab

Offered for the first time. A seedling of McIntosh apple top-grafted on Virginia Crab. Fruit oblate, red striped, two and one-fourth inches in diameter, and of the excellent rich subacid flavor that would be expected from a seedling of the McIntosh. Season about August. The name is abbreviated from McIntosh. The high flavor makes the Into crab worthy of trial.

Trees, one year buds on Dolgo crab seedlings, 75 cents each.

## Kola Crab

Introduced 1922. A hybrid of the wild native crab apple from Elk River, Minnesota, with pollen of Duchess of Oldenburg apple. The fruit is flat, green, full two inches in diameter on the original tree fruiting in greatly crowded nursery rows of seedlings. The skin is oily as in the wild crab. The fruit cooks up into an acceptable sauce. Trees have strong forks and appear immune to blight and winter killing. Kola is the Sioux Indian name for "friend." The heaviest specimen of Kola in 1919 weighed three ounces; the largest was two and one-half inches in diameter. This was the first year of fruiting.

Price of trees, one year buds on seedlings of Yellow Siberian Crab, each 75 cents.

## New Duchess Apple

Offered for the first time. This is the name under which I imported this variety some years ago from Russia. The trees are productive and the fruit appears to be much the same as the Duchess of Oldenburg. Perhaps the basin is less corrugated and the size is extra large.

Trees, one year buds on seedlings of Yellow Siberian Crab, each 50 cents.

## Chinook Apple

Offered for the first time. The first of my series of hybrids of the standard apples with the wild crab in which the wild crab is the pollen parent. In this case the seed parent is the Baldwin apple, and the pollen parent is the wild crab of Elk River, about forty miles north of Minneapolis, Minnesota. Of promise for the far North. The first fruits of the Chinook apple are only two inches in diameter but this will probably increase somewhat on older trees. Fruit oblate, of a fine dark red, subacid, season probably all winter. Named after an Indian tribe.

Scions only available 2 feet for \$1.00.

## Shoko Crab

Introduced 1922. A hybrid of the wild crab of Elk River, Minnesota with pollen of Alexander apple, one of the largest Russian apples. Fruit nearly two inches in diameter, green, acid, but cooking into an acceptable sauce. The size of the fruit will probably increase, as the original tree is much crowded in nursery rows. Shoko is the Sioux Indian for "seven."

Price of trees, strong one year buds on seedlings of Yellow Siberian crab, each 75 cents.

## Tipi Crab

Introduced 1922. Also a hybrid of the wild crab of Elk River, Minnesota, with pollen of the Duchess of Oldenburg apple and much the same in tree and fruit as Kola. Tipi is the Teton Indian for "tent."

Price of trees, one year old buds on seedlings of Yellow Siberian crab, each 75 cents.

## Zapta Crab

Introduced 1922. A hybrid of the wild native crab apple from Elk River, Minnesota, with pollen of the Bismarck apple, a large variety from New Zealand resembling the Alexander. Fruit two and one-eighth inches in diameter, green, acid and acerb, but cooks up well into sauce. The original tree is closely crowded in our seedling nursery so the size of the fruit will probably increase under propagation. Zapta is the Sioux Indian for "five."

Price of trees, strong one year buds on Yellow Siberian crab, each 75 cents.

## Oxbo Apple

Introduced 1922. A seedling of Roxbury Russet apple top-grafted on Duchess of Oldenburg apple. The name is condensed from these two varieties. Fruit of fair size, up to two and five-eighths inches in diameter; white, juicy, subacid. Season probably late fall, but not fully determined. A stocky grower in nursery.

Price of trees, one year buds on Dolgo Crab seedlings, each 50 cents.

## Caramel Apple

Introduced 1919. One of our seedlings from mixed seed of choice standard Northern apples. Fully medium size, two and three-fourths inches in diameter. Late yellow mostly covered with red stripes. Evidently of the Fameuse type. Flesh snow white, sweet, excellent. Of promise as a winter sweet apple of highest quality, but probably should go south rather than north. The name Caramel is given to it because it is a sweet apple.

Trees, one year buds on seedlings of Dolgo Crab, each 75 cents.

## Goldo Apple

Introduced 1922. A seedling of Grimes Golden top-grafted on Duchess of Oldenburg apple. The name is condensed from these two varieties. Goldo is distinguished by the smooth, hardy, vigorous growth of the original tree. The fruit is much like Grimes Golden in general appearance and excellent flavor. If the trees prove hardy under propagation it will be a decided acquisition as a variety combining the hardiness of Duchess with the size and high quality of Grimes Golden. The flesh cooks quickly into light yellow sauce of excellent flavor.



## Chance Apple

Introduced 1919. The original tree bore a good crop again in 1919. One of our chance seedlings from mixed seed of northern grown apples. Original tree productive. Fruit oblate, regular, of full commercial size, red-striped all over with attractive blue bloom. Flesh white, pleasant subacid. Season probably January or later. I hope this will help on the late-keeping apple problem. The fruit is certainly of attractive appearance.

Trees: One year buds on Dolgo crab seedlings, each 50 cents.

## Sasha Apple

Introduced 1919. A seedling of the Hibernial pollinated with Gravenstein pollen. The fruit is a fine yellow oblate and excellent quality sweet apple of full commercial size; the tree is of strong, stocky growth, has blighted a little but not more than some of the standard varieties. The pedigree indicates it should combine hardiness and quality. Sasha is a Russian man's name.

Trees, one year buds on seedlings of Dolgo crab, each 50 cents.

Price, one year buds on Dolgo Crab seedlings, each \$1.00.

## Zeleba Apple

Introduced 1922. Our own importation from Russia. The full name, Krimskaja Zeleba, indicates that the Crimea in southern Russia is the place of origin. As fruited here it is a very large round red apple, size about 3½ inches in diameter, and very heavy, flesh white, pleasant subacid. The fruit cooks up well. An apple of very attractive color, excellent fruit. Season about December to mid-winter.

Trees, one year buds on Dolgo crab seedlings. Price, each 50 cents.

## Yellow Sweet Apple

This old Russian apple has borne abundant fruit for many years in the Russian apple orchard of this Department. It is one of the earliest apples, round, yellow, juicy, sweet. This variety should find a place in every family orchard.

Trees, one year buds on Dolgo Crab seedlings, each 50 cents.

## Dolgo Crab

### A New Red-Jellied Siberian Crab

At the annual exhibits of this Department at the South Dakota State Fair many have asked about the remarkably long, conical, intensely bright red crabs we used in making letters. This is one I brought over from my second trip to Russia in 1897. A vigorous productive tree and so far free from blight. Fruit full of juice, jells easily, makes a rich ruby red jelly of beautiful color and excellent flavor.

The one year old trees in nursery are of strong growth with wide spreading forks and strongly shouldered limbs, indicating that they will not split down easily.

Trees, one year buds on seedlings of Alexis and Dolgo Crabs, each 50 cents.

## Olga Crab

Introduced 1919. Pedigree: Female parent, Duchess of Oldenburg apple. Male parent, *Pyrus baccata cerasifera*, which is much like the old Cherry crab. This combines the Russian apple with the Siberian crab. Fruit is regular, oblate, fully 1½-inch in diameter on the original seedling tree. Color solid bright cherry red all over with blue bloom, dots distinct, white, many large; basin quite shallow, smooth; cavity wide, obtuse with considerable russet. Calyx mostly deciduous. Flesh is yellowish white, crisp, juicy, acid, of good quality. Flesh is yellow with red core outline. Very good to eat raw as it mellows. The fruit cooks up very quickly, as easily as the Duchess apple itself, and the sauce is of an attractive deep salmon red. Under propagation the trees may slightly increase in size of fruit. The tree is a vigorous stocky grower with strong forks and extremely productive.

Trees, one year buds on seedlings of Dolgo crab, each 50 cents.

## Linda Sweet Crab

Introduced 1923. A seedling of Malinda apple top-grafted on Sweet Russet Crab apple. A large crab apple with skin much russeted. Flesh mild subacid sweet. Apparently a late winter crab. The influence of the Sweet Russet pollen is evident from the sweet flesh and russet skin. Linda is derived from the word Malinda.

Price of trees, one year buds on seedlings of Dolgo crab, each 50 cents.

## Alexis Crab

Introduced 1919. Alexis is a Russian man's name. I have grown thousands of seedlings of Siberian crab apples, hoping to obtain varieties free from blight. The Alexis was raised from seed obtained from the Imperial Botanic Gardens at Petrograd, Russia. Fruit much like the Dolgo crab, long conical, polished, brilliant, dark solid cherry crab with attractive blue bloom. Flsh yellow, acid. Tree very productive, free from blight so far.

Trees, one year buds on Dolgo crab seedlings, each 50 cents.

## Beauty Crab

Introduced 1919. One of our seedlings of *Pyrus baccata cerasifera* raised from seed received from the Botanical Gardens at Petrograd, Russia. The name Beauty has been given to this seedling because it is perhaps the brightest in color of all our crab seedlings. It is a brilliant solid cherry red all over with orange red underneath especially on the shaded side. Size is about one and one-fourth inch in diameter. Tree is a very heavy bearer. The fruit makes a bright red sauce like the Hyslop crab but the flesh has not the astringency of the Hyslop. We have kept the fruit into January in a rather warm cellar. Tree is very stocky, a vigorous grower with wide and strong forks and strongly resistant to blight.

Trees, one year buds on seedlings of Olga and Alexis crab, each \$1.

## Apples on Siberian Crab Stocks

The frequent losses from root killing of the common apple stocks used in the nurseries indicated the need of harder stocks for the apple. This question was discussed in Bulletin 65 of this Station. For some years past Siberian Crab seedlings have been used in this Department as stocks for new apples to obviate the loss from root-killing. In order to make an exact comparative test it is often desirable to plant trees of standard varieties of the same age and propagated by the same method.

We have a few trees of Wealthy apple and Whitney crab apple, one year buds on Dolgo crab seedlings, each 75 cents.

## Nertchinsk Crab Seedlings

Offered for the first time. For the far North it may prove best in the long run to improve the Siberian crab by straight selection through several generations rather than by hybridization with the standard apples. The Siberian crabs very considerably in hardiness. I believe the one from Nertchinsk, eastern Siberia, near the headwaters of the Amur river, is the hardest one now available and will go farther north. They are very productive. The fruits make a beautiful sight on the tree and make as fine show as the common European Mountain Ash which is not entirely hardy here, often winter-killing after heavy fruiting. Fruits mostly small, for ornament only, and for stocks.

One year old seedlings of Nertchinsk crab, 4 for \$1.00.

## Seedlings of Named Siberian Crabs

In response to repeated requests, seedlings of some of the most promising named Siberian crabs can be spared at 6 for \$1.00. Not less than 6 of each lot. The main varieties available are Dolgo, Alexis, Amur, Beauty, Olga and several more.

## Saponsky Pear

Offered for the first time. This is S. P. I. 20336 brought from Saponsky, Eastern Siberia in 1906 by Frank Meyer as Agricultural Explorer for the U. S. Department of Agriculture. I now give it the name Saponsky to indicate its origin. This form of *Pyrus Ussuriensis* has proven very hardy, productive and free from blight. The rounded leaves are characteristic. The fruit is valuable only for the hardy seedlings to grow nursery stocks and for hybridizing.

A few one year old seedlings, \$1.00 each.

## Russian Sand Pear

In noting the behavior of the many pears imported from Northern Europe and Asia and other countries, special attention is attracted to *Pyrus Sinensis* as received from Russia under the name of *Pyrus Sinensis R & K 452*. These trees have proven hardy and have borne abundant fruit. We raised good seedlings from them. The trees have been very resistant to fire blight. The fruit is small but good for cooking. These seedlings are worthy of planting for those who wish to breed hardy pears and the fruit is valuable for the seed from which to raise hardy seedlings for budding or grafting.

A few one year seedlings can be spared at \$1.00 each.

## Waneta Plum

This is the largest of all the Hansen Hybrid Plums. It is a 2-inch 2-ounce plum, and of very strong growth in nursery. An early heavy and persistent annual bearer of delicious plums of immense size. It is a cross of the America, a large Japanese plum, with pollen of the Terry, the largest native plum. The Waneta combines in large measure the most desirable points of the native and the Japanese plums. In a visit to the 1920 Iowa State Fair at Des Moines, I noticed that Waneta and the sister variety Kahinta, were by far the largest plums on exhibition.

Trees of Waneta, one year buds on native plum roots, each \$1.00.

## Wastesa and Yuteca Plums

These are two of my best pure native plums selected from many thousands. They are noted for good quality and heavy bearing. Some pure native plums should be included in every orchard of hybrid plums to furnish abundant pollen.

Trees of Wastesa and Yuteca, one year old buds on native plum roots, each 75 cents.



## Ojibwa Plum

Introduced 1917. Pedigree: Shiro X Manitoba wild plum (*Prunus nigra*) pollen. Since the Shiro, one of Luther Burbank's plums, is a complex hybrid of four species, the Ojibwa will be a mixture of five different species of *Prunus*: *Nigra*, *Angustifolia*, *Cerasifera*, *Triflora*, *Simoni*. Flesh yellow, of good flavor; skin thin and free from acidity. In my opinion this tree is especially worthy of a trial at the North. The Ojibwa is not nearly as large as the Waneta but should go considerably farther north. The original tree has been very productive. At first sight the pointed shape would make it look like a select pure native Manitoba plum, but the skin is too thin to be a pure Manitoba. Price of trees, one year buds on native American plum roots, each \$1.00.

F. L. Skinner, Dropmore, Manitoba, Canada, writes under date of January 19, 1922: "I had a splendid crop from your Ojibwa plum this year."

## Opata Plum

This and Sapa are the two most popular of my hybrids of the native Sand Cherry of western South Dakota with Japanese plums. They bear freely on one year old shoots in nursery and the year after transplanting. They are the earliest of our stone fruits. The flesh of Opata is green, sweet and pleasant flavored. It is best to plant one year old trees so that the top may branch freely in bush from the ground up.

Trees, one year old buds on native plum roots, each \$1.00.

## Other New Plums

Of my other new hybrid plums we have a fine assortment this year. Many of these in small lots only because we are budding a set for our new plum orchard. The varieties available this year are: Tecumseh, Oziya, Sapa, Wachampa, Kahinta, Cree, Teton, Kaga.

Price of trees, one year buds on native plum stocks, customer's selection, each \$1.00. Our selection, \$8.00 per dozen.

## Tom Thumb Cherry

Offered for the first time in 1916 under number and given its present name in 1922. A seedling of the Ezaptan which is of the same pedigree as Sapa. It is practically a Sapa in fruit, but the plant is a low bush, having much the same habit as its granddam, the native Sand Cherry. Bears freely on one year shoots in nursery, from the ground up, and annually thereafter. What has been done in this seedling is really to reduce the choice black-purple flesh plum-sand cherry hybrid to the stature of a small fruit. They can be planted close together like currant bushes. Canadian friends send me favorable reports about this variety.

Plants, one year buds on native plum roots, each 50 cents.

## Native Plum Pits and Seedlings

We are often asked for pits of native plum seedlings from which to grow stocks to use for budding and grafting. We can spare some native plum pits (cleaned now and stratified for freezing in sand), at the rate of one quart for \$1.00. Price on larger lots on application. Native plum seedlings, one year old, \$4.00 per 100.

## Sand Cherry Seedlings

Western Sand Cherry, *Prunus Besseyi*. A native of the highest and driest lands west of the Missouri river in this state. A dwarf bush fruit much favored by the Sioux Indians. These plants are seedlings of our third and later generations under cultivation at the South Dakota Experiment Station, hence many of the bushes bear fruit of extra size and fruit of all the seedlings is good enough for sauce.

Price 10 one year seedlings for \$1.00.

## A Sweet Choke Cherry

Introduced 1923. W. J. Boughen, Valley River, Manitoba, found a tree of the native choke cherry on his farm with fruit so much milder in flavor than usual that it may fairly be called a sweet or chokeless choke cherry. Offered for the first time. Mr. Boughen has the first right to name this fruit so we will await developments.

One year buds on May Day tree seedlings, each \$1.00.

## Sunset Gooseberry

Offered for the first time. A few years ago I succeeded in crossing the giant gooseberries of Western Europe with the wild South Dakota gooseberry. The pollen parent is a fifth generation seedling of the wild Sioux Valley gooseberry from Lake Oakwood and Gary, South Dakota. The fruit is seven-eighths by three-fourths inches in diameter and the bush is very fruitful. The name is given in allusion to the fine red color of the fruit.

A few plants can be spared, one and two year old layers not transplanted, \$1.00 each.

## Fewthorn Raspberry

Introduced 1922. A hybrid of the Minnesota Ironclad red raspberry with pollen of a wild raspberry from the Black Hills near Rapid City, South Dakota. Canes almost thornless, except for a few weak bristles near the ground. Fruit of good size  $\frac{5}{8}$  to  $\frac{3}{4}$  inch in diameter. Color is dark red. The main point about this variety is that the berries keep well. They are firm and shrivel rather than rot.

Plants, 2 for 50 cents; 5 for \$1.00.

## Spineless Raspberry

Introduced 1922. A hybrid of the wild red raspberry from Cavalier, North Dakota, with pollen of Loudon red raspberry. Remarkable for its thornless canes. Fruit is about three-fourths of an inch in diameter, of extra good flavor. The canes have a blue bloom with some red toward the tips. In our experiments in breeding raspberries free from cane rust (anthracnose), this is one of the most immune although not quite free.

Plants, 2 for 50 cents; 5 for \$1.00.

## Starlight Raspberry

Introduced 1922. Of the same pedigree as Ohta, a hybrid of the wild red raspberry from Cavalier, North Dakota, with pollen of Minnetonka Ironclad. Canes with some thorns, but very little anthracnose. One of our very latest fruited seedlings in 1920, averaging somewhat larger than Ohta, and equally bright in color.

Plants, 2 for 50 cents; 5 for \$1.00.

## Hopa Red-Flower Crab

Introduced 1920. Hopa is the Sioux Indian word for "beautiful." A promising addition to our list of ornamental trees for the lawn owing to its wealth of beautiful deep rose crimson blossoms. A striking sight when in bloom. The fruit is too small to be of value for eating, being less than one inch in diameter, but its bright red color will light up the tree in autumn, and the small size is an advantage as the tree is less apt to be stripped for fruit when standing on the lawn. Female parent *Pyrus Malus Niedzwetzkyana*, a small red-fleshed apple from Turkestan in the high mountains between Turkestan and China, male parent *Pyrus baccata*. This was not a hand cross, but I am satisfied that the *baccata* was the pollen parent. Trees of strong growth in nursery.

Price of trees: One year buds on seedlings of *Pyrus baccata*, each \$1.00.

## May Day Tree

This bird cherry from Eastern Siberia is worthy of a place on every lawn in the prairie Northwest. It is remarkable for being the first tree to come into full leaf here on the College grounds. The large green leaves and wealth of white blossoms early in the spring make the tree decidedly ornamental. In fruit the tree is no special improvement over our own native choke cherry, but is decidedly superior in habit because it does not send up sprouts or suckers. These seedlings are descended from the stock originally imported from Russia by Professor J. L. Budd.

Price, small transplanted trees, each 50 cents.

I am using these seedlings as a budding stock for the Boughen Manitoba Sweet Choke Cherry because of its vigorous growth and freedom from suckers.

## A New Siberian Basket Willow

Introduced 1921. In the fall of 1913 in the dry steppe region of Semipalatinsk, Siberia, I walked along a small creek which had almost dried up. Stumbling I seized hold of a willow and found that the branches simply would not break. So I brought home a few cuttings. You may tie bow knots in these pliable shoots but it appears practically impossible to break them. They ought to be good as a tie willow for nursery work or for basketry.

Cuttings, 10 for 50 cents.

## Russian Silver-Leaved Willow

Introduced 1921. Some years ago I brought from Russia a silver-leaved willow under the name *Salix regalis*. The botanical status of this tree according to Bailey, appears to be *Salix alba*, var. *splendens* or *Salix alba*, var. *argentea*, hence a form of the white willow.

These trees have made a strong growth, are perfectly hardy, and are noteworthy for the silvery foliage. A rich silver satin on both sides.

Cuttings, 10 for 50 cents.

## New Ulm Black Walnut

The farthest northwestern limit of the native black walnut is probably near New Ulm, Minnesota. This lot of trees began to bear at seven years from the seed. Northern planters should plant this northern form of the Black Walnut, one of our most valuable trees.

A few one-year trees of the second generation, each 50 cents.



## Siberian Almond--Earliest Shrub to Bloom

*Amygdalus nana* L. All visitors to the college grounds in early spring are attracted by the remarkable color display of this beautiful shrub, which should be planted in every garden in the Northwest and far north into Canada. A dwarf ornamental with abundant, bright rose pink flowers, the very first of all shrubs to bloom in the spring. Good in front of other shrubs on the lawn. Grown from our importations from the dry steppes of the Semipalatinsk region of Siberia.

Strong transplanted plants, each 50 cents; \$4.00 per dozen.

## Semipalatinsk Bush Honeysuckle

Introduced 1921. In 1913 on the dry steppes at Semipalatinsk, Siberia, I found a choice Bush Honeysuckle of tall growth with yellow or red berries. This will be hardy far north. Good for hedges, screens, or as single specimens.

Price, small stocky transplanted plants, each 50 cents; large bushy plants, 3 to 5 feet, each 75 cents.

## Other Bush Honeysuckles

From the extensive collection of Bush Honeysuckles on the grounds of this Department some fine plants have been grown. We can supply in assortment of strong transplanted plants 3 to 4 feet in height. 50 cents each, \$4 per dozen.

## Manitoba Hazelnut

Ornamental as well as useful. The need is apparent of a nut bearing shrub for the open prairie. We now have the wild native hazel nut of Manitoba in the third generation under cultivation. Visitors to the college grounds have been pleased with the heavy bearing of these hazel hedges. The plants vary greatly in size of fruit and in time will no doubt approximate that of the filberts of England and France. Small transplanted plants, each 50 cents.

## Tetonkaha Rose

Introduced 1912. A seedling of the wild prairie rose from Lake Tetonkaha, about eighteen miles northwest of this station, crossed with the pollen of the Siberian *Rosa rugosa*, so that it is a combination of at least three species. In the 100 seedlings obtained from the cross, 74 were double and 26 single; all deep pink and fragrant. The stock offered consists of root sprouts from these 26 original double flowered seedlings. The flowers are fully 3 inches in diameter; the bush is perfectly hardy, flowering abundantly in June; about 18 to 25 petals, deep rich pink; very fragrant; appears desirable for dwarf hedges or as an ornamental shrub. The habit is more upright and the flowers are less concealed by the foliage than in the pure *Rosa rugosa*. This Tetonkaha rose proves absolutely hardy and very desirable in many places even far north into Manitoba without winter protection. It is a very free bloomer. Plants of strong growth and as they sprout freely it should not be necessary to propagate on tender commercial stocks or from cuttings.

Strong transplanted plants, each 75 cents. If sent by parcel post, smaller plants will be sent.

## Rosa Rugosa, Siberian Form

The well known beautiful hardy rose with dark crimson single flowers up to four inches in diameter. Attractive ornamental in autumn and early winter with large bright red fruits, which are used, with seeds removed, for food in its native home. Our own importation, descended from the original introduction from Siberia by the Imperial Botanical Gardens, at Petrograd, Russia. The Siberian form of this species is superior to the Japanese form.

Large plants, several years old, each \$1.00.

## Semipalatinsk Alfalfa Seed and Plants

Described in Bulletins 141 and 167. From the dry steppes of Semipalatinsk, Siberia. Some of the farmers who have had excellent results with this alfalfa on the driest uplands of the west now abbreviate this word to Semi. A variety of great vigor and especially adapted to transplanting into cultivated rows. It is not at its best at the first season as it first makes its remarkable root system. It does its own subsoiling on hardpan. Flowers yellow. I find this to be the strongest in growth of all the varieties of *Medicago falcata*.

This variety shells its seed through a long season, which is Nature's way of securing a stand in its native country with only eight inches total annual rainfall. To improve the seeding habit from the standpoint of raising seed, let the plants stand uncut and select seed from the plants that hold their seed the longest. Some will hold the seed until frost.

Price of seed, per small packet, 50 cents.

Plants for transplanting, 20 for \$1.00.

## Hansen White Siberian Proso

A large grain millet from Semipalatinsk, Siberia. Good for table food and for all kinds of live stock. Their surest crop in an 8-inch annual rainfall climate in Siberia. For table recipes, see Bulletin 158 of this Station. Two pounds of seed, specially selected for large seed, sent prepaid by parcel post, 50 cents. Price per bushel on application.

## Cossack Alfalfa Seed and Plants

**Cossack Alfalfa.** Introduced from Russia and named by Prof. N. E. Hansen. This has the world's record of increasing from a spoonful of seed in 1906 to a thousand bushels of seed in 1916. Now much more. The acreage of Cossack Alfalfa is rapidly increasing because it is extremely hardy and very productive both of forage and seed. For spring I have only a few pounds of Cossack seed, grown in 1921 on our old plot here on the Station grounds, available for special experiments. Price of Cossack alfalfa seed per small packet, 50 cents.

In the hands of many farmers the setting out of Cossack alfalfa plants and cultivating them in the garden makes a positive and quick way of raising a lot of pure seed from the original stock.

Price of Cossack alfalfa plants of one season's growth from seed, per 100, \$1.00.

## Caragana

*Caragana arborescens*, also called the Siberian pea tree, is the best plant for hedges, low wind-breaks and snow-catchers for the entire prairie Northwest, extending far north into Canada. In 1897, as Agricultural Explorer for the United States Department of Agriculture, Washington, D. C., I imported about 350 pounds of Caragana seed from Russia. This was not the first importation but perhaps the largest ever made. At any rate this seed served a good purpose in introducing the plant very extensively.

We have some seedlings and transplanted plants descended from this importation. Prices upon application.

## Siberian Lavatera

*Lavatera Thuringiaca*. A tall growing perennial flower which I found growing in the Semipalatinsk steppes of Siberia in 1913. Height 5 to 7 feet. Branching habit; flowers pink, somewhat of the style of single Mallows or Hollyhocks. There can be no question as to its hardiness in exposed situations. F. L. Skinner at Dropmore in north-western Manitoba reports this hardy and that it blooms all season.

Strong one year plants, two for 50 cents.

## Gladiolus

The best summer bulb for the garden. At the 1921 State Fair at Huron, this Department exhibited over 2,000 spikes in 150 choice named varieties. In 1922 and 1923 the assortment included over 500 varieties and the entire wing of the Horticulture Building at the State Fair at Huron was transformed in "The Fairyland of Flowers." These bulbs are not for sale, but 12 assorted bulbs will be given as a free premium with one annual membership in the South Dakota State Horticultural Society.

## Special Offer--Double Value For Your Money

The Legislature had made this Society the Department of Horticulture for South Dakota and has fixed the price of annual membership at \$1.00. The reports are published by the state, but aside from the State Official List, the report is sent only to members. This provides a fund to help pay the running expenses of the Society.

The Society wishes to increase its membership.

As a free premium, select One Dollar's worth of seeds, plants or trees from the foregoing list. The order must be received before April 1, 1924. As the supply of some of these premiums is very limited, mark your second choice. One of the annual reports will be sent you at once. One book and one free premium amounting to One Dollar, will be sent postpaid for each \$1.00 received. Here is a good chance to get a valuable library of books on South Dakota trees, fruit and gardening, as well as some choice new fruits for the home.

After April 1, 1924, the only premium available will be one of the old annual reports. This will be sent without further notice. There will be no duplication, because our card index record shows just what reports have been sent out to everyone who has ever been a member of the Society.

The life membership is fixed by the Legislature at Ten Dollars. It is highly desirable that the Society has more life members as they are our permanent source of strength and influence. Residents of South Dakota who become life members may select Ten Dollars' worth of trees, plants, seeds or other premiums from this circular as a free premium. This includes a set of 18 annual reports now issued, as far as available, and one annual report as issued. All premiums sent by express at customer's expense. Address, N. E. HANSEN, Secretary, Brookings, South Dakota.

In place of seed and plant premiums, the following are offered. Select ONE of the following list for each annual membership.

No. 1—One back volume of the Annual Report of this Society.

No. 2—Prof. Green's Vegetable Gardening, 246 pages, paper cover.

No. 3—Prof. Green's Popular Fruit Growing, 323 pages, paper cover.

No. 4—Evergreens, "How I Grow Them," 95 pages, paper cover, by C. S. Harrison, and "Windbreaks and Shelter Belts," 69 pages, paper cover, by the late Prof. S. B. Green, University of Minnesota.

Terms—Cash with order. Positively no credit given, except to Government Experiment Stations. No orders booked until paid for. No plants sold in less than the quantities specified. Address, PROF. N. E. HANSEN, Experiment Station, Brookings, South Dakota.